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HEWLETT-PACKARD COMPANY	AHLUWALIA, NAVNEET K
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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

-- *The MAILING DATE of this communication appears on the cover sheet with the correspondence address* --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE <u>3</u> MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.
- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
  Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on <u>01 March 2007</u>.

2a)☒ This action is **FINAL**.   2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-22* is/are pending in the application.

    4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-22* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

    Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

    Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

    a)☐ All   b)☐ Some * c)☐ None of:

        1.☐ Certified copies of the priority documents have been received.

        2.☐ Certified copies of the priority documents have been received in Application No. _____.

        3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

    * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1)☐ Notice of References Cited (PTO-892)
2)☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3)☐ Information Disclosure Statement(s) (PTO/SB/08)
    Paper No(s)/Mail Date _____.

4)☐ Interview Summary (PTO-413)
    Paper No(s)/Mail Date. _____.
5)☐ Notice of Informal Patent Application
6)☐ Other: _____.

DETAILED ACTION

1.   This communication is in response to the Amendment filed March 1, 2007.

Response to Arguments

2.   Claims 1 – 22 are pending in this Office Action. After a further search and a thorough examination of the present application, claims 1 – 22 remain rejected. Applicant's arguments filed with respect to claims 1 - 22 have been fully considered but they are not persuasive.

Applicant argues that there is no teaching in Gao of creating/updating a recommencement reference to the subsequent element.

In response to Applicant's argument, the Examiner submits that Gao teaches the recommencement reference to the subsequent element as the next pointer in column 2 lines 46 – 58. Furthermore, Gao teaches that the next pointer points to one of the containers in the queue in column 3 lines 9 – 20 and lines 51 – 59. The next pointer clearly is the recommencement reference for the subsequent element and the locked element is released.

Claims 5 and 22 recite the same subject matter and for the same reasons as cited above the rejection is maintained. Hence, Applicant's arguments do not distinguish the claimed invention over the prior art of record. In light of the foregoing arguments, the 102 rejections are sustained.

Claim Rejections - 35 USC § 102

3.   The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that

form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

4.   Claims 1 – 22 are rejected under 35 U.S.C. 102(e) as being anticipated by Gao

et al. ('Gao' herein after) (US 6,898,650 B1).

With respect to claim 1,

Gao discloses a method for retrieving data comprising: locking a linked list

(column 2 lines 46 – 54, Gao); retrieving data from an element in the linked list and also

advancing to a subsequent element while a breakpoint is not encountered (Figure 3,

column 3 lines 51 – 59, Gao); marking the subsequent element in the linked-list as in-

use when a breakpoint is encountered (column 3 lines 39 – 50, Gao); creating a

recommencement reference to the subsequent element (column 4 lines 36 – 49, Gao);

and unlocking the linked list (column 4 lines 60 – 66, Gao).

With respect to claim 2,

Gao discloses the method of claim 1 further comprising: locking the linked list

(column 2 lines 46 – 54, Gao); determining a subsequent element in the linked list

according to the recommencement reference (column 5 lines 1 – 9, Gao); and retrieving

data from the determined subsequent element (column 5 lines 10 – 17, Gao).

With respect to claim 3,

     Gao discloses the method of claim 1 wherein creating a recommencement

reference to the subsequent element comprises: retrieving a pointer to the subsequent

element (column 2 lines 46 – 54, Gao); determining a process identifier for a current

process (column 2 lines 64 – 67 and column 3 lines 1 – 8, Gao); and associating the

pointer with the process identifier (column 3 lines 64 – 67 and column 4 lines 1 – 9,

Gao).

With respect to claim 4,

     Gao discloses the method of claim 1 wherein marking the subsequent element in

the linked-list as in-use comprises maintaining a count of the quantity of processes that

require additional access to the element (figure 3 and column 3 lines 39 – 51, Gao).

With respect to claim 5,

     Gao discloses a method for deleting an element from a linked list comprising:

determining if the element to be deleted is in-use (column 5 lines 10 – 21, Gao);

updating a recommencement reference to the element to refer to a data element that is

subsequent to the data element to be deleted when the element in is in-use (Table 14,

Gao); and deleting the element (column 5 lines 25 – 43, Table 14, Gao).

With respect to claim 6,

Gao discloses the method of claim 5 wherein updating a recommencement reference to the element comprises: discovering a pointer associated with a process identifier (column 5 lines 1 – 9, Gao); disassociating the process identifier from the pointer; determining a pointer to a subsequent element (column 5 lines 10 – 17, Gao); and associating the process identifier with the newly determined pointer (column 2 lines 64 – 67 and column 3 lines 1 – 8, Gao).

With respect to claim 7,

Gao discloses an apparatus for storing and retrieving data comprising: processor capable of executing an instruction sequence, memory for storing an instruction sequence, input unit for receiving data (Figures 1, 5A and 5 B, Gao); first output unit for providing data according to a received data request, one or more ancillary output units for providing data according to a received data request (column 2 lines 46 – 54, Gao); instruction sequences stored in the memory including: data storage module that, when executed by the processor, minimally causes the processor to: receive data from the input unit allocate a data element to accommodate the data create a reference to the data element (column 5 lines 1 – 9, Gao); store the reference in at least one of a header pointer and a forward pointer included in a preceding data element and store the data in the data element (column 1 lines 29 – 43, Gao); data service module that, when executed by the processor, minimally causes the processor to: recognize a data request

from the first output unit to the exclusion of all other data requests (column 3 lines 51 –

62, Gao); provide data to the first output unit from a data element according to a data

element reference and also advance the data element reference to a subsequent data

element while a breakpoint is not encountered (column 2 lines 31 – 38, Gao); mark a

subsequent data element as in-use when a breakpoint is encountered (column 3 lines

39 – 50, Gao); create a recommencement reference to a subsequent data element

(column 4 lines 36 – 49, Gao); and enable recognition of other data requests (column 4

lines 60 – 66, Gao).

With respect to claim 8,

Gao discloses the apparatus of claim 7 wherein the data service module, when

executed by the processor, further minimally causes the processor to: recognize a data

request from the first output unit to the exclusion of all other data requests (column 2

lines 46 – 54, Gao); and provide data to the first output unit from a data element

according to the recommencement reference (column 5 lines 1 – 9, Gao).

With respect to claim 9,

Gao discloses the apparatus of claim 7 wherein the data service module causes

the processor to create a recommencement reference by minimally causing the

processor to: retrieve a pointer to a data element subsequent to a current data element

(column 2 lines 64 – 67 and column 3 lines 1 – 8, Gao); determine an identifier

associated with the data request received from the first output unit and store the

retrieved pointer and the determined identifier in an associative manner (column 3 lines

64 – 67 and column 4 lines 1 – 9, Gao).

With respect to claim 10,

Gao discloses the apparatus of claim 7 wherein the data service module causes

the processor to mark a subsequent data element as in-use by minimally causing the

processor to increment a use counter included in a subsequent data element (figure 3

and column 3 lines 39 – 51, Gao).

With respect to claim 11,

Gao discloses the apparatus of claim 7 wherein the data service module further

minimally causes the processor to receive a delete data request from an output unit by

minimally causing the processor to: determine if a data element to be deleted is in-use

(column 5 lines 10 – 21, Gao); update a recommencement reference to refer to a data

element that is subsequent to the data element to be deleted (Table 14, Gao); and

delete the data element according to the received delete data request (column 5 lines

25 – 43, Table 14, Gao).

With respect to claim 12,

Gao discloses the apparatus of claim 11 wherein the data service module causes

the processor to update a recommencement reference by minimally causing the

processor to: discover a pointer according to a data request identifier (column 5 lines 1

– 9, Gao); and replace the pointer with a pointer to a data element that is subsequent to

the data element to be deleted (column 5 lines 10 – 17, Gao).

With respect to claim 13,

Gao discloses a computer readable medium having imparted thereon one or

more instruction sequences for storing and retrieving data comprising: data storage

module that, when executed by a processor, minimally causes the processor to: receive

data from an input unit, allocate a data element to accommodate the data (Figures 1, 5A

and 5 B, Gao); create a reference to the data element (column 5 lines 1 – 9, Gao) store

the reference in at least one of a header pointer and a forward pointer included in a

preceding data element and store the data in the data element (column 1 lines 29 – 43,

Gao); data service module that, when executed by a processor, minimally causes the

processor to: recognize a data request from a first output unit to the exclusion of all

other data requests (column 3 lines 51 – 62, Gao); provide data to a first output unit

from a data element according to a data element reference and also advance the data

element reference to a subsequent data element while a breakpoint is not encountered

(column 2 lines 31 – 38, Gao); mark a subsequent data element as in-use when a

breakpoint is encountered (column 3 lines 39 – 50, Gao); create a recommencement

reference to a subsequent data element (column 4 lines 36 – 49, Gao); and enable

recognition of other data requests (column 4 lines 60 – 66, Gao).

With respect to claim 14,

Gao discloses the computer readable medium of claim 13 wherein the data

service module, when executed by a processor, further minimally causes the processor

to: recognize a data request from a first output unit to the exclusion of all other data

requests (column 2 lines 46 – 54, Gao); and provide data to a first output unit from a

data element according to the recommencement reference (column 5 lines 1 – 9, Gao).

With respect to claim 15,

Gao discloses the computer readable medium of claim 13 wherein the data

service module causes a processor to create a recommencement reference by

minimally causing the processor to: retrieve a pointer to a data element subsequent to a

current data element (column 2 lines 64 – 67 and column 3 lines 1 – 8, Gao); determine

an identifier associated with a data request received from a first output unit and store

the retrieved pointer and the determined identifier in an associative manner (column 3

lines 64 – 67 and column 4 lines 1 – 9, Gao).

With respect to claim 16,

Gao discloses the computer readable medium of claim 13 wherein the data

service module causes a processor to mark a subsequent data element as in-use by

minimally causing the processor to increment a use counter included in a subsequent

data element (figure 3 and column 3 lines 39 – 51, Gao).

With respect to claim 17,

Gao discloses the computer readable medium of claim 13 wherein the data service module further minimally causes the processor to receive a delete data request from an output unit by minimally causing the processor to: determine if a data element to be deleted is in-use (column 5 lines 10 – 21, Gao); update a recommencement reference to refer to a data element that is subsequent to the data element to be deleted (Table 14, Gao); and delete the data element according to the received delete data request (column 5 lines 25 – 43, Table 14, Gao).

With respect to claim 18,

Gao discloses the computer readable medium of claim 17 wherein the data service module causes the processor to update a recommencement reference by minimally causing the processor to: discover a pointer according to a data request identifier (column 5 lines 1 – 9, Gao); and replace the pointer with a pointer to a data element that is subsequent to the data element to be deleted (column 5 lines 10 – 17, Gao).

With respect to claim 19,

Gao discloses an apparatus for storing and retrieving data comprising: means for locking a linked list (column 2 lines 46 – 54, Gao); means for retrieving data from an element in the linked list and also advancing to a subsequent element while a breakpoint is not encountered (Figure 3, column 3 lines 51 – 59, Gao); means for marking the subsequent element in the linked-list as in-use when a breakpoint is

encountered (column 3 lines 39 – 50, Gao); means for creating a recommencement

reference to the subsequent element (column 4 lines 36 – 49, Gao); and means for

unlocking the linked list (column 4 lines 60 – 66, Gao).

With respect to claim 20,

Gao discloses the apparatus of claim 19 further comprising: means for locking

the linked list (column 2 lines 46 – 54, Gao); means for determining a subsequent

element in the linked list according to the recommencement reference (column 5 lines 1

– 9, Gao); and means for retrieving data from the determined subsequent element

(column 5 lines 10 – 17, Gao).

With respect to claim 21,

Gao discloses the apparatus of claim 19 further comprising a means for deleting

an element in the linked-list (column 5 lines 10 – 21, Gao).

With respect to claim 22,

Gao discloses the apparatus of claim 21 wherein the means for deleting an

element comprises: means for determining if the element to be deleted is in-use

(column 5 lines 10 – 21, Gao); means for updating a reference to the element to refer to

a subsequent element in the linked list when the element in is in-use (Table 14, Gao);

and means for deleting the element (column 5 lines 25 – 43, Table 14, Gao).

Conclusion

5.   **THIS ACTION IS MADE FINAL.** See MPEP § 706.07(a). Applicant is reminded

of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE

MONTHS from the mailing date of this action. In the event a first reply is filed within

TWO MONTHS of the mailing date of this final action and the advisory action is not

mailed until after the end of the THREE-MONTH shortened statutory period, then the

shortened statutory period will expire on the date the advisory action is mailed, and any

extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of

the advisory action. In no event, however, will the statutory period for reply expire later

than SIX MONTHS from the date of this final action.

Contact Information

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Navneet K. Ahluwalia whose telephone number is 571-272-5636.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Alam T. Hosain can be reached on 571-272-3978. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Navneet

Navneet K. Ahluwalia
Examiner
Art Unit 2166

Dated: 05/10/2007

HOSAIN ALAM
SUPERVISORY PATENT EXAMINER